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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: Tue Aug 14 09:28:38 EDT 2007

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Reviewer Comments:

<210> 11

<211> 320

<212> PRT

<213> Clostridium acetobutylicum

<220>

<221> MOD_RES

<222> (2)..(3)

<223> Variable amino acid

<400> 11

Lys Arg Xaa Xaa Ala Val Ile Leu Met Val Ala Val Ile Phe Thr Ile

1

5

10

15

The above <222> response is incorrect: the Xaa's are at locations 3 and 4.

Application No: 09445289 Version No: 8.0

Input Set:

Output Set:

Started: 2007-08-13 16:20:28.993
Finished: 2007-08-13 16:20:30.790
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 797 ms
Total Warnings: 12
Total Errors: 8
No. of SeqIDs Defined: 63
Actual SeqID Count: 63

Error code	Error Description
E 257	Invalid sequence data feature in <221> in SEQ ID (11)
E 341	'Xaa' position not defined SEQID (11) POS (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (37)
E 257	Invalid sequence data feature in <221> in SEQ ID (38)
E 257	Invalid sequence data feature in <221> in SEQ ID (38)
W 213	Artificial or Unknown found in <213> in SEQ ID (39)
W 213	Artificial or Unknown found in <213> in SEQ ID (40)
W 213	Artificial or Unknown found in <213> in SEQ ID (41)
W 213	Artificial or Unknown found in <213> in SEQ ID (46)
W 213	Artificial or Unknown found in <213> in SEQ ID (47)
W 213	Artificial or Unknown found in <213> in SEQ ID (48)
W 213	Artificial or Unknown found in <213> in SEQ ID (49)
W 213	Artificial or Unknown found in <213> in SEQ ID (50)
W 213	Artificial or Unknown found in <213> in SEQ ID (51)
W 213	Artificial or Unknown found in <213> in SEQ ID (52)
W 213	Artificial or Unknown found in <213> in SEQ ID (53)
E 257	Invalid sequence data feature in <221> in SEQ ID (60)
E 257	Invalid sequence data feature in <221> in SEQ ID (61)
E 257	Invalid sequence data feature in <221> in SEQ ID (61)
E 257	Invalid sequence data feature in <221> in SEQ ID (62)

SEQUENCE LISTING

<110> MUKAMOLOVA, GALINA V.
KAPRELYANTS, ARSENY S.
YOUNG, DANIELLE I.
KELL, DOUGLAS B.
YOUNG, MICHAEL

<120> BACTERIAL PHEROMONES AND USES THEREFOR

<130> 49946-60261

<140> 09445289
<141> 2000-05-11

<150> 09/445,289
<151> 2000-05-11

<150> PCT/GB98/01619
<151> 1998-06-03

<150> GB 9711389.8
<151> 1997-06-04

<150> GB 9811221.2
<151> 1998-05-27

<160> 63

<170> PatentIn Ver. 3.3

<210> 1
<211> 362
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 1
Met Leu Arg Leu Val Val Gly Ala Leu Leu Leu Val Leu Ala Phe Ala
1 5 10 15

Gly Gly Tyr Ala Val Ala Ala Cys Lys Thr Val Thr Leu Thr Val Asp
20 25 30

Gly Thr Ala Met Arg Val Thr Thr Met Lys Ser Arg Val Ile Asp Ile
35 40 45

Val Glu Glu Asn Gly Phe Ser Val Asp Asp Arg Asp Asp Leu Tyr Pro
50 55 60

Ala Ala Gly Val Gln Val His Asp Ala Asp Thr Ile Val Leu Arg Arg
65 70 75 80

Ser Arg Pro Leu Gln Ile Ser Leu Asp Gly His Asp Ala Lys Gln Val
85 90 95

Trp Thr Thr Ala Ser Thr Val Asp Glu Ala Leu Ala Gln Leu Ala Met
100 105 110

Thr Asp Thr Ala Pro Ala Ala Ser Arg Ala Ser Arg Val Pro Leu
115 120 125

Ser Gly Met Ala Leu Pro Val Val Ser Ala Lys Thr Val Gln Leu Asn
130 135 140

Asp Gly Gly Leu Val Arg Thr Val His Leu Pro Ala Pro Asn Val Ala
145 150 155 160

Gly Leu Leu Ser Ala Ala Gly Val Pro Leu Leu Gln Ser Asp His Val
165 170 175

Val Pro Ala Ala Thr Ala Pro Ile Val Glu Gly Met Gln Ile Gln Val
180 185 190

Thr Arg Asn Arg Ile Lys Lys Val Thr Glu Arg Leu Pro Leu Pro Pro
195 200 205

Asn Ala Arg Arg Val Glu Asp Pro Glu Met Asn Met Ser Arg Glu Val
210 215 220

Val Glu Asp Pro Gly Val Pro Gly Thr Gln Asp Val Thr Phe Ala Val
225 230 235 240

Ala Glu Val Asn Gly Val Glu Thr Gly Arg Leu Pro Val Ala Asn Val
245 250 255

Val Val Thr Pro Ala His Glu Ala Val Val Arg Val Gly Thr Lys Pro
260 265 270

Gly Thr Glu Val Pro Pro Val Ile Asp Gly Ser Ile Trp Asp Ala Ile
275 280 285

Ala Gly Cys Glu Ala Gly Gly Asn Trp Ala Ile Asn Thr Gly Asn Gly
290 295 300

Tyr Tyr Gly Val Gln Phe Asp Gln Gly Thr Trp Glu Ala Asn Gly
305 310 315 320

Gly Leu Arg Tyr Ala Pro Arg Ala Asp Leu Ala Thr Arg Glu Glu Gln
325 330 335

Ile Ala Val Ala Glu Val Thr Arg Leu Arg Gln Gly Trp Gly Ala Trp
340 345 350

Pro Val Cys Ala Ala Arg Ala Gly Ala Arg
355 360

<210> 2
<211> 188
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 2
Met Pro Val Gly Trp Leu Trp Arg Ala Arg Thr Ala Lys Gly Thr Thr

1	5	10	15
Leu Lys Asn Ala Arg Thr Thr Leu Ile Ala Ala Ala Ile Ala Gly Thr			
20	25	30	
Leu Val Thr Thr Ser Pro Ala Gly Ile Ala Asn Ala Asp Asp Ala Gly			
35	40	45	
Leu Asp Pro Asn Ala Ala Ala Gly Pro Asp Ala Val Gly Phe Asp Pro			
50	55	60	
Asn Leu Pro Pro Ala Pro Asp Ala Ala Pro Val Asp Thr Pro Pro Ala			
65	70	75	80
Pro Glu Asp Ala Gly Phe Asp Pro Asn Leu Pro Pro Pro Leu Ala Pro			
85	90	95	
Asp Phe Leu Ser Pro Pro Ala Glu Glu Ala Pro Pro Val Pro Val Ala			
100	105	110	
Tyr Ser Val Asn Trp Asp Ala Ile Ala Gln Cys Glu Ser Gly Gly Asn			
115	120	125	
Trp Ser Ile Asn Thr Gly Asn Gly Tyr Tyr Gly Gly Leu Arg Phe Thr			
130	135	140	
Ala Gly Thr Trp Arg Ala Asn Gly Gly Ser Gly Ser Ala Ala Asn Ala			
145	150	155	160
Ser Arg Glu Glu Gln Ile Arg Val Ala Glu Asn Val Leu Arg Ser Gln			
165	170	175	
Gly Ile Arg Ala Trp Pro Val Cys Gly Arg Arg Gly			
180	185		

<210> 3
<211> 174
<212> PRT
<213> *Mycobacterium leprae*

<400> 3			
Met Ser Glu Ser Tyr Arg Lys Leu Thr Thr Ser Ser Ile Ile Val Ala			
1	5	10	15
Lys Ile Thr Phe Thr Gly Ala Met Leu Asp Gly Ser Ile Ala Leu Ala			
20	25	30	
Gly Gln Ala Ser Pro Ala Thr Asp Ser Glu Trp Asp Gln Val Ala Arg			
35	40	45	
Cys Glu Ser Gly Gly Asn Trp Ser Ile Asn Thr Gly Asn Gly Tyr Leu			
50	55	60	
Gly Gly Leu Gln Phe Ser Gln Gly Thr Trp Ala Ser His Gly Gly Gly			
65	70	75	80

Glu Tyr Ala Pro Ser Ala Gln Leu Ala Thr Arg Glu Gln Gln Ile Ala
85 90 95

Val Ala Glu Arg Val Leu Ala Thr Gln Gly Ser Gly Ala Trp Pro Ala
100 105 110

Cys Gly His Gly Leu Ser Gly Pro Ser Leu Gln Glu Val Leu Pro Ala
115 120 125

Gly Met Gly Ala Pro Trp Ile Asn Gly Ala Pro Ala Pro Leu Ala Pro
130 135 140

Pro Pro Pro Ala Glu Pro Ala Pro Pro Gln Pro Pro Ala Asp Asn Phe
145 150 155 160

Pro Pro Thr Pro Gly Asp Val Pro Ser Pro Leu Ala Arg Pro
165 170

<210> 4
<211> 407
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 4
Met Ser Gly Arg His Arg Lys Pro Thr Thr Ser Asn Val Ser Val Ala
1 5 10 15

Lys Ile Ala Phe Thr Gly Ala Val Leu Gly Gly Gly Ile Ala Met
20 25 30

Ala Ala Gln Ala Thr Ala Ala Thr Asp Gly Glu Trp Asp Gln Val Ala
35 40 45

Arg Cys Glu Ser Gly Gly Asn Trp Ser Ile Asn Thr Gly Asn Gly Tyr
50 55 60

Leu Gly Gly Leu Gln Phe Thr Gln Ser Thr Trp Ala Ala His Gly Gly
65 70 75 80

Gly Glu Phe Ala Pro Ser Ala Gln Leu Ala Ser Arg Glu Gln Gln Ile
85 90 95

Ala Val Gly Glu Arg Val Leu Ala Thr Gln Gly Arg Gly Ala Trp Pro
100 105 110

Val Cys Gly Arg Gly Leu Ser Asn Ala Thr Pro Arg Glu Val Leu Pro
115 120 125

Ala Ser Ala Ala Met Asp Ala Pro Leu Asp Ala Ala Val Asn Gly
130 135 140

Glu Pro Ala Pro Leu Ala Pro Pro Pro Ala Asp Pro Ala Pro Pro Val
145 150 155 160

Glu Leu Ala Ala Asn Asp Leu Pro Ala Pro Leu Gly Glu Pro Leu Pro
165 170 175

Ala Ala Pro Ala Asp Pro Ala Pro Pro Ala Asp Leu Ala Pro Pro Ala
180 185 190

Pro Ala Asp Val Ala Pro Pro Val Glu Leu Ala Val Asn Asp Leu Pro
195 200 205

Ala Pro Leu Gly Glu Pro Leu Pro Ala Ala Pro Ala Asp Pro Ala Pro
210 215 220

Pro Ala Asp Leu Ala Pro Pro Ala Pro Ala Asp Leu Ala Pro Pro Ala
225 230 235 240

Pro Ala Asp Leu Ala Pro Pro Ala Pro Ala Asp Leu Ala Pro Pro Val
245 250 255

Glu Leu Ala Val Asn Asp Leu Pro Ala Pro Leu Gly Glu Pro Leu Pro
260 265 270

Ala Ala Pro Ala Glu Leu Ala Pro Pro Ala Asp Leu Ala Pro Ala Ser
275 280 285

Ala Asp Leu Ala Pro Pro Ala Pro Ala Asp Leu Ala Pro Pro Ala Pro
290 295 300

Ala Glu Leu Ala Pro Pro Ala Pro Ala Asp Leu Ala Pro Pro Ala Ala
305 310 315 320

Val Asn Glu Gln Thr Ala Pro Gly Asp Gln Pro Ala Thr Ala Pro Gly
325 330 335

Gly Pro Val Gly Leu Ala Thr Asp Leu Glu Leu Pro Glu Pro Asp Pro
340 345 350

Gln Pro Ala Asp Ala Pro Pro Pro Gly Asp Val Thr Glu Ala Pro Ala
355 360 365

Glu Thr Pro Gln Val Ser Asn Ile Ala Tyr Thr Lys Lys Leu Trp Gln
370 375 380

Ala Ile Arg Ala Gln Asp Val Cys Gly Asn Asp Ala Leu Asp Ser Leu
385 390 395 400

Ala Gln Pro Tyr Val Ile Gly
405

<210> 5
<211> 155
<212> PRT
<213> *Mycobacterium leprae*

<400> 5
Met Pro Gly Glu Met Leu Asp Val Arg Lys Leu Cys Lys Leu Phe Val
1 5 10 15

Lys Ser Ala Val Val Ser Gly Ile Val Thr Ala Ser Met Ala Leu Ser

20	25	30
Thr Ser Thr Gly Met Ala Asn Ala Val Pro Arg Glu Pro Asn Trp Asp		
35	40	45
Ala Val Ala Gln Cys Glu Ser Gly Arg Asn Trp Arg Ala Asn Thr Gly		
50	55	60
Asn Gly Phe Tyr Gly Gly Leu Gln Phe Lys Pro Thr Ile Trp Ala Arg		
65	70	75
80		
Tyr Gly Val Gly Asn Pro Ala Gly Ala Ser Arg Glu Gln Gln Ile		
85	90	95
Thr Val Ala Asn Arg Val Leu Ala Asp Gln Gly Leu Asp Ala Trp Pro		
100	105	110
Lys Cys Gly Ala Ala Ser Asp Leu Pro Ile Thr Leu Trp Ser His Pro		
115	120	125
Ala Gln Gly Val Lys Gln Ile Ile Asn Asp Ile Ile Gln Met Gly Asp		
130	135	140
Thr Thr Leu Ala Ala Ile Ala Leu Asn Gly Leu		
145	150	155
<210> 6		
<211> 176		
<212> PRT		
<213> <i>Mycobacterium tuberculosis</i>		
<400> 6		
Met His Pro Leu Pro Ala Asp His Gly Arg Ser Arg Cys Asn Arg His		
1	5	10
15		
Pro Ile Ser Pro Leu Ser Leu Ile Gly Asn Ile Ser Ala Thr Ser Gly		
20	25	30
Asp Met Ser Ser Met Thr Arg Ile Ala Lys Pro Leu Ile Lys Ser Ala		
35	40	45
Met Ala Ala Gly Leu Val Thr Ala Ser Met Ser Leu Ser Thr Ala Val		
50	55	60
Ala His Ala Gly Pro Ser Pro Asn Trp Asp Ala Val Ala Gln Cys Glu		
65	70	75
80		
Ser Gly Gly Asn Trp Ala Ala Asn Thr Gly Asn Gly Lys Tyr Gly Gly		
85	90	95
Leu Gln Phe Lys Pro Ala Thr Trp Ala Ala Phe Gly Gly Val Gly Asn		
100	105	110
Pro Ala Ala Ala Ser Arg Glu Gln Gln Ile Ala Val Ala Asn Arg Val		
115	120	125

Leu Ala Glu Gln Gly Leu Asp Ala Trp Pro Thr Cys Gly Ala Ala Ser
130 135 140

Gly Leu Pro Ile Ala Leu Trp Ser Lys Pro Ala Gln Gly Ile Lys Gln
145 150 155 160

Ile Ile Asn Glu Ile Ile Trp Ala Gly Ile Gln Ala Ser Ile Pro Arg
165 170 175

<210> 7
<211> 154
<212> PRT
<213> *Mycobacterium tuberculosis*

<400> 7
Met Thr Pro Gly Leu Leu Thr Thr Ala Gly Ala Gly Arg Pro Arg Asp
1 5 10 15

Arg Cys Ala Arg Ile Val Cys Thr Val Phe Ile Glu Thr Ala Val Val
20 25 30

Ala Thr Met Phe Val Ala Leu Leu Gly Leu Ser Thr Ile Ser Ser Lys
35 40 45

Ala Asp Asp Ile Asp Trp Asp Ala Ile Ala Gln Cys Glu Ser Gly Gly
50 55 60

Asn Trp Ala Ala Asn Thr Gly Asn Gly Leu Tyr Gly Gly Leu Gln Ile
65 70 75 80

Ser Gln Ala Thr Trp Asp Ser Asn Gly Gly Val Gly Ser Pro Ala Ala
85 90 95

Ala Ser Pro Gln Gln Ile Glu Val Ala Asp Asn Ile Met Lys Thr
100 105 110

Gln Gly Pro Gly Ala Trp Pro Lys Cys Ser Ser Cys Ser Gln Gly Asp
115 120 125

Ala Pro Leu Gly Ser Leu Thr His Ile Leu Thr Phe Leu Ala Ala Glu
130 135 140

Thr Gly Gly Cys Ser Gly Ser Arg Asp Asp
145 150

<210> 8
<211> 99
<212> PRT
<213> *Streptomyces coelicolor*

<400> 8
Ile Arg Thr Ala Ala Val Thr Leu Val Ala Ala Thr Ala Leu Gly Ala

1	5	10	15
Thr Gly Glu Ala Val Ala Ala Pro Ser Ala Pro Leu Arg Thr Asp Trp			
	20	25	30
Asp Ala Ile Ala Ala Cys Glu Ser Ser Gly Asn Trp Gln Ala Asn Thr			
	35	40	45
Gly Asn Gly Tyr Tyr Gly Gly Leu Gln Phe Ala Arg Ser Ser Trp Ile			
	50	55	60
Ala Ala Gly Gly Leu Lys Tyr Ala Pro Arg Ala Asp Leu Ala Thr Arg			
	65	70	75
Gly Glu Gln Ile Ala Val Ala Glu Arg Leu Ala Arg Leu Gln Gly Met			
	85	90	95
Ser Ala Trp			

<210> 9
 <211> 438
 <212> PRT
 <213> *Bacillus subtilis*

<400> 9
 Met Gly Glu Arg Glu Gly Arg Val Asp Ser Leu Leu Asp Thr Leu Tyr
 1 5 10 15

Asn Leu Ser Glu Glu Lys Glu Ala Phe Phe Ile Thr Gln Lys Met Lys
 20 25 30

Lys Leu Phe Ser Val Lys Leu Ser Lys Ser Lys Val Ile Leu Val Ala
 35 40 45

Ala Cys Leu Leu Leu Ala Gly Ser Gly Thr Ala Tyr Ala Ala His Glu
 50 55 60

Leu Thr Lys Gln Ser Val Ser Val Ser Ile Asn Gly Lys Lys Lys His
 65 70 75 80

Ile Arg Thr His Ala Asn Thr Val Gly Asp Leu Leu Glu Thr Leu Asp
 85 90 95

Ile Lys Thr Arg Asp Glu Asp Lys Ile Thr Pro Ala Lys Gln Thr Lys
 100 105 110

Ile Thr Ala Asp Met Asp Val Val Tyr Glu Ala Ala Lys Pro Val Lys
 115 120 125

Leu Thr Ile Asn Gly Glu Glu Lys Thr Leu Trp Ser Thr Ala Lys Thr
 130 135 140

Val Gly Ala Leu Leu Asp Glu Gln Asp Val Asp Val Lys Glu Gln Asp
 145 150 155 160

Gln Ile Asp Pro Ala Ile Asp Thr Asp Ile Ser Lys Asp Met Lys Ile
165 170 175

Asn Ile Glu Pro Ala Phe Gln Val Thr Val Asn Asp Ala Gly Lys Gln
180 185 190

Lys Lys Ile Trp Thr Ser Thr Thr Val Ala Asp Phe Leu Lys Gln
195 200 205

Gln Lys Met Asn Ile Lys Asp Glu Asp Lys Ile Lys Pro Ala Leu Asp
210 215 220

Ala Lys Leu Thr Lys Gly Lys Ala Asp Ile Thr Ile Thr Arg Ile Glu
225 230 235 240

Lys Val Thr Asp Val Val Glu Glu Lys Ile Ala Phe Asp Val Lys Lys
245